

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
27 January 2005 (27.01.2005)

PCT

(10) International Publication Number
WO 2005/007211 A3

(51) International Patent Classification⁷: **A61L 31/16,**
A61P 41/00

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:
PCT/US2004/021452

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(22) International Filing Date: **2 July 2004 (02.07.2004)**

Published:

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:
60/485,251 **3 July 2003 (03.07.2003)** US

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(71) Applicant (for all designated States except US): **MEDTRONIC VASCULAR INC. [US/US]; IP Legal Department, 3576 Unocal Place, Santa Rosa, CA 95403 (US).**

(88) Date of publication of the international search report: **28 July 2005**

(72) Inventor; and

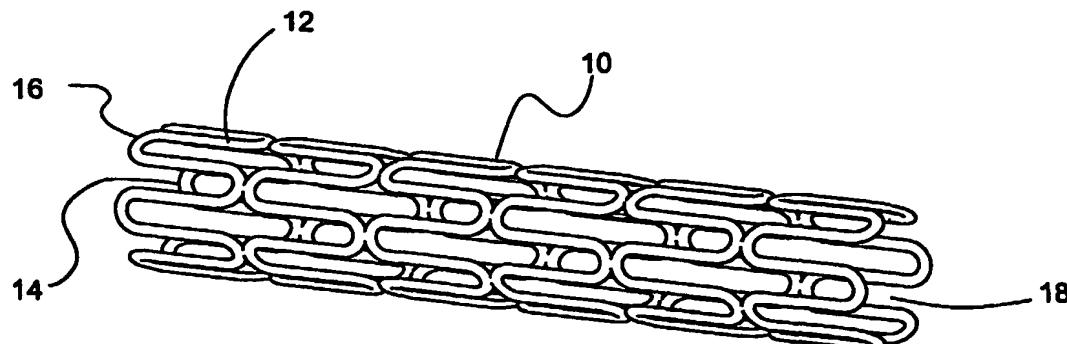
(75) Inventor/Applicant (for US only): **TEDESCHI, Eugene [US/US]; 3053 Porter Creek Road, Santa Rosa, CA 95404 (US).**

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(74) Agent: **JARO, Michael; IP Legal Department, 3576 Unocal Place, Santa Rosa, CA 95403 (US).**

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

(54) Title: MEDICAL DEVICES WITH PROTEASOME INHIBITORS FOR THE TREATMENT OF RESTENOSIS



WO 2005/007211 A3

(57) Abstract: Methods, compositions and devices for inhibiting restenosis are provided. Specifically, proteasome inhibitor compositions and medical devices useful for the site specific delivery of proteasome inhibitors are disclosed. In one embodiment the medical device is a vascular stent coated with a proteasome inhibitor selected from the group consisting of a boronic acid, a C-terminal peptide aldehyde and derivatives and analogues thereof. In another embodiment an injection catheter for delivery an anti-restenotic effective amount of proteasome inhibitor to the adventitia is provided.